

CLAIMS:

1. A subtractive display device comprising picture elements having sub-pixels, each sub-pixel having, viewed during operation in a direction normal to the substrates, at least two independently switchable electro-optical components, the device further comprising a color filter in which each sub-pixel color filter part absorbs or reflects one of a part of the optical spectral range, the parts of the optical spectral range being substantially non - overlapping, the device comprising means for controlling absorption or reflection of remaining parts of the spectral range in each sub-pixel by the at least two switchable electro-optical components , the non -overlapping ranges together covering the optical spectral range
2. A subtractive display device according to claim 1 in which one of the at least two switchable electro-optical components in each sub-pixel is switchable between a substantially transparent or translucent state and a state absorbing or reflecting a first part of the remainder of the spectral range.
3. A subtractive display device according to claim 2 in which at least one further switchable electro-optical component in each sub-pixel is switchable between a substantially transparent or translucent state and a state absorbing or reflecting the remainder of the spectral range.
4. A subtractive display device according to claim 2 in which at least one further of the at least two switchable electro-optical components in each sub-pixel is switchable between a substantially transparent or translucent state and a state substantially transparent or translucent to a part of the remainder of the spectral range.
5. A subtractive display device according to claim 2 or 4 in which at least one further switchable electro-optical component in each sub-pixel is switchable between a substantially transparent or translucent state and a state substantially transparent or translucent to the remainder of the spectral range.

6. A subtractive display device according to claim 2 having cyan, magenta and yellow color filter parts, at least one of two switchable electro-optical components in each sub-pixel being switchable between a substantially transparent or translucent state and one of the colors cyan, magenta and yellow.

5

7. A subtractive display device according to claim 6 the other of the two switchable electro-optical components in each sub-pixel being switchable between a substantially transparent or translucent state and one of the colors cyan, magenta and yellow.

10

8. A subtractive display device according to claim 2 having cyan, magenta and yellow color filter parts, at least one of two switchable electro-optical components in each sub-pixel being switchable between a substantially transparent or translucent state and one of the colors cyan, magenta and yellow, the other of the two switchable electro-optical components in each sub-pixel being switchable between a substantially transparent or translucent state and the colors red, green and blue.

15

9. A display device according to Claim 1 or 2 in which a sub-pixel corresponds to a defined space.

20

10. A display device according to Claim 1 each sub-pixel having between a first support plate and a second support plate, viewed in a direction normal to the substrates, at least two switchable electro-optical layers, the device comprising means for creating at least two different states in each layer, the layers in a sub-pixel switching between a substantially transparent or translucent state and two different colors.

25

11. A display device according Claim 10 having at least two first fluids of different colors of the color filter part and a second fluid, the second fluids being immiscible with the first fluids within a space between the first support plate and the second support plate, the second fluid being electroconductive or polar in which a picture element corresponds to a defined space having a wall part dividing the space into at least three sub-picture elements, in the first state each of the first fluids adjoining separate support plates within each sub-picture element.

30

12. A display device according to Claim 1 which comprises an absorber or a reflector at the side of one of the substrates.

13. A subtractive display device comprising picture elements having sub-pixels,
5 each sub-pixel having, viewed during operation in a direction normal to the substrates, n
independently switchable electro-optical components ($n > 2$), the device further comprising a
color filter in which each sub-pixel color filter part absorbs or reflects one of a part of the
optical spectral range, the parts of the optical spectral range being substantially non -
overlapping, the device comprising means for controlling absorption or reflection of
10 remaining parts of the spectral range in each sub-pixel by $(n-1)$ switchable electro-optical
components, the non-overlapping ranges together covering the optical spectral range